

UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

In re Application of: Juergen Eberle et al.
Application Number: 10/584,161
Filing Date: 03/29/2007
Group Art Unit: 3744
Examiner: Jonathan Bryan Koagel
Title: REFRIGERATING UNIT COMPRISING AN ULTRASOUND-WELDED SUCTION TUBE AND A THROTTLE TUBE

Mail Stop Appeal Brief - Patents

Commissioner for Patents
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REPLY BRIEF

Appellants hereby file a Reply Brief to the Examiner's Answer mailed January 24, 2011 for the above-identified application.

The Examiner's Answer dated January 24, 2011, includes a new arguments that were not presented before in the Final Rejection or the Advisory Action.

Appellants respond to those arguments as follows:

First, in regard to the rejection of claims 7-10, 12-14, 19, 20, 22, 26 and 27 over the combination of Electrogeräte (FR 1516944) in view of Dobson et al. (U.S. Patent Publication No. 2002/0184911 A1), the Examiner at the paragraph bridging pages 4 and 5 of the Examiner's Answer includes a new argument. Specifically, the Examiner states:

Furthermore as evidenced by Matsubara (U.S. Patent No. 6,827,753 B2), who discloses in Figures 1 and 6, two tubes (14 and tubing case valve 48) being connected together at fitting portion 30 through the use of ultrasound welding (column 4, lines 50-53).

Appellants respectfully submit that the reliance on Matsubara et al. to support the rejection essentially amounts to a new grounds for rejection. Furthermore, Appellants respectfully submit that the Examiner's reliance on Matsubara et al. tends to show that the basic combination of Electrogeräte and Dobson et al. is lacking. In particular, Dobson et al. teaches the use of ultrasonic welding in conjunction with two plastic half pipe sections. While Dobson et al. teaches an alternative to use a metal half pipe section, there is no disclosure that such metal half pipe sections are ultrasonically welded.

Matsubara et al. still does not make up for the deficiencies noted above in regard to Dobson et al. since Matsubara et al. does not teach or suggest the ultrasonic welding between outer surfaces of the throttling tube and the suction tube where they contact one another. Matsubara et al. according to the Examiner teaches two tubes 14 and 48. However, these tubes are not connected to one another at outer surfaces thereof. Rather, Matsubara et al. teaches the ultrasonic welding of a valve 48 to a gas pipe. Moreover, neither Dobson et al. nor Matsubara et al. provides any reason or motivation to apply their ultrasound welding techniques to the outer surfaces of the throttling tube and supply tube shown in Electrogeräte.

Second, the Examiner has not provided any substantial evidence which demonstrates that soldering and brazing are equivalent techniques. Claim 12 requires a solder joint at the outlet location while claim 16 also requires a soldering joint at the outlet location. Claims 12 and 16 each require both a soldering joint at the outlet location and an ultrasonic welding at the second location which is spaced from the outlet location.

No prior art reference applied by the Examiner teaches the claimed soldering joint. In addition, the Examiner has not provided any substantial evidence that the brazing joint which is disclosed in Electrogeräte is an equivalent technique to the soldering joint. In fact, soldering

joints and brazing joints operate using filler materials that melt at mutually exclusive temperatures, brazing occurring substantially above 427°C (800°F) and soldering occurring at temperatures substantially below 427°C (800°F). In addition, brazing and soldering techniques require different fluxes, and other techniques, materials, etc.

Third, Matsubara et al., like Dobson et al., only teaches a single type of ultrasonic weld, thus it is not obvious to modify Electrogeräte by substituting only the brazing weld or the soft weld with the ultrasonic weld. Rather, if anything, Matsubara et al. and Dobson et al. both suggest to replace both types of joints with the same type of weld. Moreover, there is simply no reason why the Examiner has selected the second location as including the ultrasonic weld, as opposed to the first location, i.e., the outlet.

Fourth, the Examiner has indicated that one cannot show obviousness by attacking references individually. While that may have some validity, Appellants did not provide an individual attack of the references. Rather, Appellants pointed out that there is no motivation or reason in Dobson et al. to ultrasonically weld two different pipes. While Electrogeräte teaches the use of joining tube pipes at their outer surfaces, Dobson et al. does not relate to that type of joining technique and thus, there is a lack of motivation to look to Dobson et al. in order to modify Electrogeräte.

Fifth, the Examiner indicates that Electrogeräte discloses in Figure 11 two types of joints, a brazed induction and a soft weld for joining the suction tube to the throttling tube. There is no teaching or disclosure in Electrogeräte that the brazed joint is any different than the soft weld. Indeed, many types of brazing techniques could be considered welding, depending on the exact temperature used. Moreover, in view of what is stated above, since the brazed joint could easily qualify as a welded joint, then if anything, there would seem to be a suggestion to replace both

the brazed/welded joint and the soft weld with the ultrasonic welding technique as disclosed in Dobson et al. However, at least claims 12 and 7+16 require two different types of joints, one being a soldered joint and the other being an ultrasonically welded joint.

Sixth, the Examiner states that because a distance exists between the first and second locations, the distance parameter has been determined to be “a result effective variable”. Appellants respectfully traverse this assertion since the mere fact that a distance is shown between the joint locations in Electrogeräte is not any evidence that that distance is a result effective parameter.

For the reasons explained in the Appeal Brief and the instant Reply Brief, the Board should reverse the Final Rejection.

Respectfully submitted,

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March 14, 2011

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